

- 26) (New) A fluorescence electronic endoscopic system for viewing subject matter comprising, in combination:
- I) at least one excitation light emitting system structured and arranged to illuminate the subject matter with excitation light;
 - II) at least one non-excitation light emitting system structured and arranged to illuminate the subject matter with non-excitation light;
 - III) at least one alternating system structured and arranged to alternate use of said at least one excitation light emitting system and said at least one non-excitation light emitting system,
 - ① wherein said at least one alternating system is structured and arranged to illuminate the subject matter for first periods of time essentially only said at least one excitation light emitting system, and
 - ② wherein said at least one alternating system is structured and arranged to illuminate the subject matter for second periods of time by said at least one non-excitation light emitting system;
 - IV) at least one filtering system structured and arranged to prevent transmission of excitation light and permit transmission of fluorescence emitted from the subject matter and non-excitation light;
 - V) at least image sensing system, structured and arranged to sense images of the subject matter from light transmitted by said filtering system, comprising,
 - ① at least one black-and-white CCD inside an endoscope,
 - ② at least three video channels, wherein:
 - 1. at least one of said video channels transmits at least one such image sensed during such first period of time; and
 - 2. at least two of said video channels each transmit at least one such image sensed during such second period of time
 - VI) at least one superimposing system structured and arranged to superimpose such images sensed by said image sensing system,
 - ① wherein at least one such image sensed during such first period of time is superimposed with at least one such image sensed during such second period of time to create at least one such superimposed image; and

- VII) at least one image viewing system structured and arranged to permit viewing such at least one superimposed image.
- 27) (New) The fluorescence electronic endoscopic system according to claim 26 further comprising an adjuster filter structured and arranged to adjust the intensity of excitation light emitted from said at least one excitation light emitting system.
- 28) (New) The fluorescence electronic endoscopic system according to claim 26 further comprising an adjuster filter structured and arranged to adjust the intensity of non-excitation light emitted from said at least one non-excitation light emitting system.
- 29) (New) The fluorescence electronic endoscopic system according to claim 26 wherein said at least one image viewing system comprises at least one RGB color monitor.
- 30) (New) The fluorescence electronic endoscopic system according to claim 26 for viewing subject matter comprising, in combination:
- I) at least one light emitting system, structured and arranged to illuminate the subject matter, comprising,
 - ① at least one source of white light,
 - ② at least one blue filter structured and arranged to permit transmission of essentially only excitation light,
 - ③ at least one green filter structured and arranged to permit transmission of non-excitation light, and
 - ④ at least one red filter structured and arranged to permit transmission of non-excitation light;
 - II) at least one alternating system structured and arranged to alternate use of said at least one blue filter, said at least one green filter, and said at least one red filter, wherein
 - ① for at least one first period of time, said at least one alternating system is structured and arranged to illuminate the subject matter essentially only by light filtered by said at least one blue filter,
 - ② for at least one second period of time, said at least one alternating system is structured and arranged to illuminate the subject matter essentially only by light filtered by said at least one green filter, and
 - ③ for at least one third period of time, said at least one

alternating system is structured and arranged to illuminate the subject matter essentially only by light filtered by said at least one red filter,

- III) at least one barrier filter structured and arranged to substantially prevent transmission of excitation light and permit transmission of fluorescence emitted from the subject matter and non-excitation light;
 - IV) at least one image sensing system structured and arranged to sense images of the subject matter from light transmitted by said at least one barrier filter, comprising,
 - ① at least one black-and-white CCD inside an endoscope,
 - ② at least three video channels, wherein:
 - 1. at least one of said video channels transmits at least one first image sensed during the at least one first period of time,
 - 2. at least one of said video channels transmit at least one second image sensed during the at least one second period of time, and
 - 3. at least one of said video channels each transmit at least one third image sensed during the at least one third period of time;
 - V) at least one superimposing system structured and arranged to superimpose such at least one first image, such at least one second image, and such at least one third image, to create at least one superimposed image; and
 - VI) at least one image viewing system structured and arranged to permit viewing such at least one superimposed image.
- 31) (New) The fluorescence electronic endoscopic system according to claim 30 wherein said at least one image viewing system comprises at least one RGB color monitor.
- 32) (New) The fluorescence electronic endoscopic system according to claim 30 further comprising at least one adjuster filter structured and arranged to reduce the intensity of green light.
- 33) (New) The fluorescence electronic endoscopic system according to claim 30 further comprising at least one adjuster filter structured and arranged to reduce the intensity of red light.

- 34) (New) A fluorescence electronic endoscopic system for viewing subject matter comprising, in combination:
- I) at least one excitation light emitting system structured and arranged to illuminate the subject matter with excitation light;
 - II) at least one non-excitation light emitting system structured and arranged to illuminate the subject matter with non-excitation light;
 - III) at least one alternating system structured and arranged to alternate use of said at least one excitation light emitting system and said at least one non-excitation light emitting system,
 - ① wherein said at least one alternating system is structured and arranged to illuminate the subject matter for first periods of time essentially only said at least one excitation light emitting system, and
 - ② wherein said at least one alternating system is structured and arranged to illuminate the subject matter for second periods of time by said at least one non-excitation light emitting system;
 - IV) at least image sensing system, structured and arranged to sense images of the subject matter, comprising,
 - ① at least one color CCD inside an endoscope,
 - ② at least three video channels, wherein:
 - 1. at least one of said video channels is structured and arranged to differentiate without using any filters or dichroic mirrors between the excitation light and the fluorescence emitted from the subject matter, and transmit only the fluorescence image during such first period of time, and
 - 2. at least two of said video channels are structured and arranged each to transmit at least one such image sensed during such second period of time
 - V) at least one superimposing system structured and arranged to superimpose such images sensed by said image sensing system,
 - ① wherein at least one such image sensed during such first period of time is superimposed with at least one such image sensed during such second period of time to create at least one such superimposed image; and

REMARKS

If there are any fees required by this communication, please inform the applicant at the fax phone number -81-29-851-3721.

Respectfully submitted,

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